AUTHOR INDEX, VOLUME 8

Abuin, E. Lissi, E. A., and Yanez, A.: Polymerization Initiated by Triethylborane-Peroxide Mixtures, 515
Akahane, T. and Mochizuhi, T: Planar Orientation of Molecular Chains in Crystalline Polymer Films, 487
–, and –: Shifts of X-Ray Diffraction Angles of Polymeric Systems with Annealing, 493
Albizzati, E.: see Giannini, U.
Altares, T., Jr.: Supercritical Fluid Chromatography: Molecular Weight Calculations from the Chromatogram, 761
Anad, L. C.: see Dixit, S. S.
Antropiusova, H.: see Gaylord, N. G.
Arakawa, T. and Nagátoshi, F.: Melting of Paracrystals, 41
Armstrong, G. H. and Hardwood, H. J.: Copolymerization of Methacrolein with Styrene in the Presence of ZnCl2, 627
Arnold, B.: see Gaylord, N. G.
Atarashi, Y.: see Matsumura, K.
Augl, J. M.: see Wrasidlo, W.
Aylward, N. N.: The n-Propylester of Stereoregular Poly(Styrene Sulfonic Acid), 377
Ayrey, G., Poller, R. C., and Siddiqui, I. H.: Mechanism of Stabilization of Poly(Vinyl Chloride), 1
Baer, E.: see Tuinstra, F.
Banderet, A.: see Periard, J.
Bank, M. I. and Krimm, S.: Mixed Crystal Infrared Study of Chain Segregation in Polyethylene, 143
Bantjes, A.: see de Visser, A. C.
Bartis, F. J.: Thermodynamic Approach to Diffuse Polymorphic Transitions, 231
Beech, D. R. and Booth, C.: Thermodynamic Point of Poly(Ethylene Oxide), 731
Bhattacharya, S. K.: see Mukerjee, H.
Bhattacharyya, A.: see Nandi, U. S.
Bolon, D. A.: see Hay, A. S.
Booth, C.: see Beech, D. R.
Brock, M. J.: see Hackathorn, M. J.
Brown, D. S., Fulcher, K. U., and Wetton, R. E.: Evidence of Simple Cubic Geometry from Small-Angle X-Ray Scattering in Three-Block Copolymers, 659
Brown, J. R. and O'Donnell, J. H.: The Radiation Stability of an Aromatic Polysulfone, 121
Buckley, C. P.; Gray, R. W., and McCrum, N. G.: Biaxially Oriented Polyethylene, 341
Calvert, P. D. and Uhlmann, D. R.: Direct Crystallization of Extended-Chain Crystals of Polyethylene from the Melt at High Pressure, 165
Campbell, D.: Ionic Species in Irradiated Polyethylene at 77° K, 313
Carlsson, D. J. and Wiles, D. M.: Surface Changes during the Photo-Oxidation of Polypropylene, 419
Casson, D. and Rembaum, A.: VII. The Effect of Ionene Polymers on a Dilute Clay Suspension, 773
Cazes, J. and Dobbins, R. J.: Estimation of Intrinsic Viscosity from Gel Permeation Chromatographic Data, 785
Cesca, S., Priola, A., and Santi, G.: The Cationic Polymerization of "Endo"- Dicyclopentadiene, 1, 2,- Dihydro- "Endo" Dicyclopentadine

and 9, 10,-Dihydro-"Endo" Dicyclopentadine, 573
Chen, H. S.: see Wang, T. T.
Chiba, K.: see Yamashita, Y.
Clark, R. F.: see Hay, A. S.
Clough, S. B.: High Temperature X-Ray Diffraction from Drawn and Stress-Crystallized Polyethylene, 519
Cooper, S. L.: see Koutsky, J. A.
Cornell, S. W. and King, J. L.: Laser-Excited Raman Scattering of Crystalline Cis-1,4-Polybutadiene, 137
Crystal, R. G.: Chain Folding during Selenium Crystallization, 37
Dařičková, A., Doskočilivá, D., Ševičk, S., and Štamberg, J.: Note on the Characterization of Ion Exchange Resins by NMR, 259
Davidson, T.: Microstructure of Particle-From Polyethylene, 855
Dawans, F.: see Durand, J. P.
Dean, J. W.: Multiple-Sequence Block Polymers of Poly(Styrene) and Poly-(Dimethylsiloxane), 677
Delvigs, P., Hsu, L.-C., and Serafini, T. T.: The Synthesis of a Novel Polymide Precursor, 29
Desai, R. L. and Shields, J. A.: Light-Initiated Crosslinking in Cellulose, 839
Deshpande, A. B.: see Dixit, S. S.
Dixit, S. S., Deshpande, A. B., and Kapur, S. L.: Polymerization of Polar Monomer by VCl_4-$Al(C_2H_5)_3$ Catalyst System in Polar Medium, 211
–, –, and Anad, L. C., and Kapur, S. L.: Alternate Copolymerization of Styrene Acrylonitrile with $VOCl_3$-$Al(C_2H_5)_3$ Catalyst System, 267
Dobbins, R. J.: see Cazes, J.
Doskočilová, D.: see Dařičková, A.
Dreyfuss, P. and Keller, A.: A Simple Chain Refolding Scheme for the Annealing Behavior of Polymer Crystals, 253
Durand, J. P. and Dawans, F.: Stereospecific Polymerization of Isoprene by Monometallic Nickel Catalysts, 743
Elliot, J. H.: see Stow, F. S., Jr.
Feyen, J.: see de Visser, A. C.
Fleming, R. J.: Carrier Mobility and Long-Range Order in Disordered Systems, 217
Fisher, E. W. and Kloos, F.: Proof of the Existance of a Glass Transition in the Surface Layers of Polyethylene Single Crystals, 685
Fitch, R. M. and Tsai, C. -H.: Polymer Colloids: Particle Formation in Nonmicellar Systems, 703
Frisch, H. L.: see Klempner, D.
Fujisawa, T. and Kakutani, M.: Preparation of Poly(Arylene Sulfides) by Iron-Catalyzed Aromatic Sulfuration with Sulfur Chlorides, 19
–, and –: Preparation of Poly(p-Phenoxyphenyl Sulfide) by Iron-Catalyzed Polymerization with a Sulfenyl Chloride, 511
Fukumoto, O.: see Matsumura, K.
Funt, B. L., McGregor, I., and Tanner, J.: Electroinitiated Copolymerization Reactions with Donor-Acceptor Complexes. II. Copolymerization of Styrene and Acrylonitrile with Zinc Bromide as Catalyst, 699
–, –, and –: Electroiniated Copolymerization Reactions with Donor-Acceptor Complexes. I. Copolymerization of Styrene and Methacrylate with Zinc Chloride as Catalyst, 695
Furukawa, J., Nishioka, A., and Kotani, T.: Statistical Segment Size and Ultimate Elongation of Acrylonitrile and Butadiene Copolymers, 25
–, Kobayashi, E., and Isedam Y.: Alternate Copolymerization of Butadiene with Acrylonitrile Accelerated by UV-Irradiation, 47

–, –, and –: $EtAlCl_2$ Complexes with Acrylic Monomers, 631
–: see Nakaniwa, M.
Galanti, A. V. and Sperling, L. H.: On The Mechanism of Strain Energy Storage in Silica Reinforced Silicone Elastomers, 115
Gaylord, N. G. and Antropiusova, H.: Donor-Acceptor Complexes in Copolymerization. VII. Competing Reactions in Styrene-Acrylonitrile Copolymerization in the Presence of Zinc Chloride, 183
–, Matyska, B., and Arnold, B.: Donor-Acceptor Complexes in Copolymerization. V. The "Non-Terminating" Stage in the Copolymerization of Styrene and Methyl Methacrylate in the Presence of $(C_2H_5)_{1.5}AlCl_{1.5}$, 235
–, and Takahashi, A.: Thermal Stabilization of Poly(Vinyl Chloride) through Reaction with Diethylalumium Chloride-Alkanol, 349
–, and –: Graft Copolymerization of Cis-1,4-Polybutadiene onto Poly(Vinyl Chloride), 361
–, and Patnaik, B.: Initiation of Free Radical Copolymerization by the Styrene-Acrylonitrile. . .$Al(C_2H_5)_{1.5}Cl_{1.5}$ Charge Transfer Complex, 401
–, and –: Effect of Temperature in the Polymerization of Charge Transfer Complexes: Styrene- and α-Methylstyrene-Acrylonitrile. . .$Al(C_2H_5)_{1.5}Cl_{1.5}$, 411
–, and –: Free Radical Copolymerization of Styrene and Methyl Methacrylate Initiated by the Styrene Maleic Anhydride Charge Transfer, 549
–, –, and Takahashi, A.: Initiation of Cationic Polymerization by the α-Methylstyrene-Acrylonitrile and -Methacrylonitrile. . .$AlEt_{1.5}Cl_{1.5}$ Charge Transfer Complexes, 809
Giannini, U.; Zucchini, U. and Albizzati, E.: Polymerization of Olefins with Benzyl Derivatives of Titanium and of Zirconium, 405
Gilks, J.: see Grassie, N.
Gouda, J. H., Povodator, K., Warren, T. C., and Prins, W.: Evidence for a Micro-Mesomorphic Structure in Poly(2-Hydroxyethyl Methacrylate) Hydrogels, 225
Graff, R. J. L., Kortleve, G., and Vonk, C. G.: On the Size of the Primary Particles in Ziegler Catalysts, 735
Grassie, N., Meldrum, I. G., and Gilks, J.: Polystyrene with Improved Thermal Properties–A New Method of Preparing Crosslinked Polystyrene, 247
Gray, R. W.: see Buckley, C. P.
Gronski, W.: see Klesper, E.
de Groot, K.: see de Visser, A. C.
Gupta, N. D.: see Nandi, U. S.
Haas, H. C. and MacDonald, R. L.: Helical Conformations and Thermally Reversible Gelation, 425
Hackathorn, M. J. and Brock, M. J.: Polyisoprene Structure from Thermal Degradation Data, 617
Hagiwara, M., Yamaji, K., Mitsui, H., and Kagiya, T.: Network Formation Induced by Acetylenic Compounds in the Polymerization of Methyl Methacrylate, 155
Hardwood, H. J.: see Armstrong, G. H.
Hasegawa, M.: see Nakanishi, H.
–: see Kato, M.
Hattori, G.: see Yamashita, Y.
Hay, A. S., Bolon, D. A., Leimer, K. R., and Clark, R. F.: Photosensitive Polyacetylenes, 97
Hay, J. N.: Thermal Analysis of n-Hectane, 395

Hayashi, K.: see Irie, M.
Henrici-Olivé, G. and Olivé, S.: Homogeneous Ziegler-Natta Catalysis with Ti(IV)-Systems. II. Atactic Low Molecular Weight Polypropylenes, 205
–, and –: Hydride and Alkyl Transfer at Ti-Al Polymerization Catalysts, 271
Hidai, M.: see Kashiwagi, T.
Hien, N. V.: see Koutsky, J. A.
Hirao, A.: see Yamashita, Y.
Hirota, M.: see Yamashita, Y.
Hodgins, J. W.: see Sood, S. P.
Hsu, L.-C.: see Delvigs, P.
Hull, D.: see Murray, J.
Ichijo, T.: see Kato, M.
Ide, F.: see Kotake, Y.
Imai, Y., Masuhara, E., and Iwakura, Y.: Initiation Mechanism of Cerium-Initiated Grafting onto Cellulosic Materials, 75
–, Minami, S., Yoshihara, T., Joh, Y., and Sato, H.: Preparation and Characterization of Amorphous Polyacrylonitrile, 281
–: A Novel Method for Preparing Polymides from N,N′-Bis (Ethoxycarbonyl) Pyromellitimide and Diamines, 555
–, and Uchiyama, H.: A Novel Interfacial Polymerization of 4-1 Chloroformyl Phtalic with Aromatic Diamines in a Methyl Ethyl Ketone-Water System, 559
Inamura, M.: see Takahashi, T.
Irie, M., Tomimoto, S., and Hayashi, K.: Cationic Polymerization of α-Methylstyrene Initiated by Excited Charge Transfer Complex, 585
Iseda, Y.: see Furukawa, J.
Ivin, K. J. and Navrátil, M.: NMR Spectrum of Poly(Propene-2-d_1 Sulfide), 51
Iwabuchi, S.: see Kojima, K.
Iwakura, Y.: see Imai, Y.
Iwata, Y.: see Kojima, K.
Jablonski, R. J., Witzel, J. M., and Kruh, D.: A New Polymer from Polybutadiene and a Prepolymer Diamine, 191
Jain, S. C.: A Comparaison of the Statistical and the Kinetic Approaches for the Variation of the Bimolecular Rate Constant with Chain Length on the Statistical Character of Condensation Polymers, 639
–, and Nanda, V. S.: A Note on Anionic Polymerization, 843
Janović, Z. and Marvel, C. S.: Copolymers of Vinyl Chloride and Vinyl Ethers, Acrylates, and Methacrylates of Some Fatty Acids, 607
Joh, Y.: see Kotake, Y.
–: see Imai, Y.
Johnsen, A.: see Klesper, E.
Kaelble, D. H.: see Shen, M.
Kagiya, T.: see Hagiwara, M.
Kakutani, M.: see Fujisawa, T.
Kambour, R. P.: Comments on "Deformation and Fracture Characteristics of Polycarbonate under High Pressure", 95
Kameoka, I.: see Nakaniwa, M.
Kamogawa, H.: Electrolytic Oxidation of Poly-*m*-N,N-Dimethylaminostyrene, 127
Kamp, A. J. and Kawahara, Y.: Tritium Labeling of Polymers Using Microwave Discharge. I. Dextran. Preliminary Study, 65
Kapur, S. L.: see Dixit, S. S.
Karayannis, N. M.: see Owens, C.
Kashiwagi, T., Hidai, M., Uchida, Y., and Misono, A.: Polymerization and Trimerization of Isocyanates Catalyzed by Nickel Complexes, 173
Kato, M., Hasegawa, M., and Ichijo, T.: Photopolymers from β-Vinyloxyethyl Esters of Cinnamic Acid

and Styryl Acrylic Acid, 263
Katz, T.: Linear Growth Rate of Polytetrafluoroethylene Spherulites, 789
Kawahara, Y.: see Kamp, A. J.
Keller, A. and Priest, D. J.: On the Effect of Annealing on the Chain Ends in Single Crystals of Polyethylene, 13
–: see Dreyfuss, P.
Keskkula, H. and Taylor, W. C.: Molecular Weight-Solution Viscosity Relationship for Polystyrene, 867
King, J. L.: see Cornell, S. W.
Klempner, D. and Frisch, H. L.: Thermal Analysis of Polyacrylate-Interpenetrating Polymer Networks, 525
Klesper, E.; Johnsen, A. and Gronski, W.: NMR Study of Configurational Sequences in Polymethacrylic Acid, 369
Kloos, F.: see Fisher, E. W.
Knox, J. R.: see Wang, J. S.
Kobayashi, E.: see Furukawa, J.
Kobayashi, M.: End-Group Analysis by Neutron Activation. Determination of Molecular Weight of α-Lin-Poly-p-Xylyene, 823
Kŏjima, K. Iwata, Y,, Nagayama, M., and Iwabuchi, S.: Polymerization of Methyl Methacrylate by trialkylborane-Pyridine System, 541
Kortleve, G.: see Graff, R. J. L.
Kotake, Y., Joh, Y., and Ide, F.: Stereospecific Polymerization of Methyl Methacryalte by Magnesium Amides, 101
Kotani, T.: see Furukawa, J.
Koutsky, J. A.; Hien, N. V., and Cooper, S. L.: Some Results on Electron Microscope Investigations of Polyether-Urethane and Polyester-Urethane Block Copolymers, 353
Kozawa, S.: see Yamashita, Y.
Kraus, G.: A Structure Concentration Equivalence Principle in Carbon Black Reinforcement of Elastomers, 601
Kresta, J. and Livingston, H. K.: The Structure of Polyfuran, 795
Krimm, S.: see Bank, M. I.
Kronick, P. L.: see Scott, H.
Kruh, D.: see Jablonski, R. J.
Kruse, R. L. and Odian, G.: Generalized Relations for Diffusion Controlled Polymerizations, 431
Kwei, T. K.: see Wang, T. T.
Labes, M. M.: see Owens, C.
Leary, D. F. and Williams, M. C.: Statistical Thermodynamics of A-B-A Block Copolymers: I, 335
LeGrand, D. G.: Domain Formation in Block Copolymers, 195
Legras, R.: see Mercier, J. P.
Leimer, K. R.: see Hay, A. S.
Lissi, E. A.: see Abuin, E.
Livingston, H. K.: see Kresta, J.
MacDonald, R. L.: see Haas, H. C.
McGregor, I.: see Funt, B. L.
Mach, M. H.: see Taylor, L. D.
MacKillop, D. A.: Thermoplastic Elastomeric Block Copolymers of Ethylene Sulfide and Propylene Sulfide, 199
MacKnight, W. J.: see Phillips, P. J.
Manaresi, P.: see Sandrolini, F.
Mandelkern, L.: see Rijke, A. M.
Marvel, C. S.: see Janović, Z.
Masuhara, E.: see Imai, Y.
Matsui, H.: see Yamashita, Y.
Matsumura, K.; Atarashi, Y., and Fukumoto, O.: Polymerization of Ethylene with Titanium Chromate-Triethylalumium System, 435
Matyska, B.: see Gaylord, N. G.
McCrum, N. G.: see Buckley, C. P.
Meldrum, I. G.: see Grassie, N.
Mercier, J. P. and Legras, R.: Correlation between the Enthalpy of Fusion and the Specific Volume of

Crystallized Polycarbonate of Bisphenol A, 645
Minami, S.: see Imai, Y.
Misono, A.: see Kashiwagi, T.
Mitcham, D.: see Vigo, T. L.
Mitsui, H.: see Hagiwara, M.
Mochizuki, T.: see Akahane, T.
Mori, K. and Nakamura, Y.: Modification of Poly(Vinyl Chloride). XV. Poly(Vinyl Chloride) Containing Polysulfide Crosslinkage, 7
Mortillaro, L.: see Sandrolini, F.
Mortimer, G. A.: Free Radical Copolymerization of the Isothiocyanate Function, 323
Mukerjee, H., Sirkar, A., and Bhattacharya, S. K.: A New Polysulfone from p,p′-Difluoro-m,m Dinitrodiphenysulfone and Pyridine, 681
Murray, J. and Hull, D.: Direct Observation of Cavity Formation in Thick Crazes, 159
Nagátoshi, F.: see Arakawa, T.
Nagayama, M.: see Kojima, K.
Nakamae, K.: see Tsuruyà, S.
Nakamura, Y.: see Mori, K.
–: see Yamashita, Y.
Nakanishi, H., Nakano, N., and Hasegawa, M.: Crystalline Polymer Obtained by Solid-State Photopolymerization of 2,5-Distyrylpyrazine, 755
Nakaniwa, M., Kameoka, I., Ozaki, K., Ohashi, H., and Furukawa, J.: Novel Binary System of Metal Alkyl and One of Series Compounds Having N–O Bond (Nitro, Nitroso, Azoxy, or N-Nitroso) for Polymerization of Alkylene Oxides and Aldehydes, 131
Nakano, N.: see Nakanishi, H.
Nanda, V. S.: see Jain, S. C.
Nandi, U. S., Gupta, N. D., and Bhattacharyya, A.: Ferric Dipivaloyl Methide as Initiator in Vinyl Polymerization, 849
Navrátil, M.: see Ivin, K. J.
Nishioka, A.: see Furukawa, J.
Nobutoki, K.: see Yamashita, Y.
Odian, G.: see Kruse, R. L.
O'Donnell, J. H.: see Brown, J. R.
Ohashi, H.: see Nakaniwa, M.
Okada, M.: see Yamashita, Y.
Okawara, M.: see Takeishi, M.
Olivé, S.: see Henrici-Olivé, G.
Osgan, M., Pasero, J. J., and Teyssie, Ph.: An Alternative Preparation of Bimetallic μ-Oxo-Alkoxides III. Catalysts for the Polymerization of Epoxides, 319
Owens, C., Pytlewski, L. L., Karayannis, N. M., Wysoczanski, J., and Labes, M. M.: Novel (Phosphonato)–Tin (IV) Polymers, 81
Ozaki, K.: see Nakaniwa, M.
Pallas, G.: see Panaris, R.
Panaris, R. and Pallas, G.: Caracterisation des Polyamides par Chromatographie sur Gel (GPC) en Millieu Hexamethylphosphorotriamide, 441
Pasero, J. J.: see Osgan, M.
Patnaik, B.: see Gaylord, N. G.
Periard, J., Banderet, A., and Riess, G.: Emulsifying Effect of Block and Graft Copolymers-Oil in Emulsions, 109
Pham, Q.-T.: Analyse de la Microstructure des Polyisoprene de Synthese par Resonance Magnetique Nucleaire-Haute Resolution, 723
Philippoff, W.: Symmetry Conditions in Laminar Flow of Polymer Solutions, 107
Phillips, P. J. and MacKnight, W. J.: Mechanical and Thermal Properties of Phosphorylated Polyethylene, 87
Pietra, S.: see Sandrolini, F.
Pittman, A. G., Wasley, W. L., and Roitman, J.: Polymers Derived

from Fluoroketones. IV. Poly (1,4-Bis(Heptafluoroisopropoxy) 2-Butene Oxide), 873
Platt, T. E.: see Taylor, L. D.
Poller, R. C.: see Ayrey, G.
Porter, R. S.: see Sakamoto, K.
—: see Wang, J. S.
Povodator, K.: see Gouda, J. H.
Priest, D. J.: see Keller, A.
Prins, W.: see Gouda, J. H.
Priola, A.: see Cesca, S.
Pytlewski, L. L.: see Owens, C.
Rao, K. N.: see Rao, M. H.
Rao, M. H. and Rao, K. N.: Radiation Induced Polymerization of Trioxane, 643
Rembaum, A., Rile, H., and Somoano, R.: V. Kinetics of Formation of High Charge Density Ionene Polymers, 457
—: see Casson, D.
—: see Somoano, R.
Riess, G.: see Periard, J.
Rijke, A. M. and Mandelkern, L.: The Fusion of Irradiated Linear Polyethylene Crystallized by High Speed Stirring, 717
Rile, H.: see Rembaum, A.
Roberts, R. C.: The Melting Behavior of Bulk Crystallized Polymers, 381
Roitman, J.: see Pittman, A. G.
Russo, M.: see Sandrolini, F.
St. Pierre, L. E.: see Yim, A.
Sakamoto, K. and Porter, R. S.: Comparison of Normal Stress Measurements on Polymer Melts, 177
Sandrolini, F., Manaresi, P., Pietra, S., Mortillaro, L., and Russo, M.: Synthesis and Electrical Conductivity of Polyselenomethylenes, 748
Santi, G.: see Cesca, S.
Sato, H.: see Imai, Y.
Scott, H., Serafin, F. L., and Kronick, P. L.: Polyimidazopyrrolone Reverse Osmosis Membranes, 563
Seiki, T.: see Tsuji, K.
Serafin, F. L.: see Scott, H.
Serafini, T. T.: see Delvigs, P.
Ševčik, S.: see Daříčková, A.
Shen, M. and Kaelble, D. H.: On the Viscoelastic Behavior of a Styrene-Butadiene-Styrene (S-B-S) Block Copolymer, 149
Shields, J. A.: see Desai, R. L.
Siddiqui, I. H.: see Ayrey, G.
Sirkar, A.: see Mukerjee, H.
Somoano, R., Yen, S. P. S., and Rembaum, A.: VI. Electronic Conductivity of Elastomeric Ionenes, 467
—: see Rembaum, A.
Sood, S. P. and Hodgins, J. W.: Temperature Effects in the Gamma-Initiated Polymerization of Styrene, 529
Sperling, L. H.: see Galanti, A. V.
Štamberg, J.: see Daříčková, A.
Stannett, V.: see Williams, J. L.
Stow, F. S., Jr. and Elliott, J. H.: Drag on a Tethered Ball in Solutions of Drag Reducing Polymers, 611
Sumitomo, H.: see Takemura, I.
Suzuki, H.: Proton Resonance Spectra of Poly(Ether) Urethane Elastomers and Model Compounds, 767
Takahashi, A.: see Gaylord, N. G.
Takahashi, T., Inamura, M., and Tsujimoto, I.: Epitaxial Growth of Polymer Crystals on Drawn Polymers, 651
Takeishi, M. and Okawara, M.: Reaction of Poly(Vinyl Chloride) Containing Azide Groups, 829
Takemura, I. and Sumitomo, H.: Alternating Copolymerization of α-Cyanomethyl Acrolein with Styrene, 293
Tanner, J.: see Funt, B. L.
Taoka, S.: see Tsuruya, S.

Tasi, C.-H.: see Fitch, R. M.
Taylor, L. D., Platt, T. E., and Mach, M. H.: The Synthetic Chemistry of Bis-5-Oxazolones, 537
Taylor, W. C.: see Keskkula, H.
Teyssie, Ph.: see Osgan, M.
Tobolsky, A. V.: see Toth, W. J.
Tomimoto, S.: see Irie, M.
Toth, W. J. and Tobolsky, A. V.: Polymerization of Liquid Crystal Monomers, 289
–, and –: Electric Field Orientation of Concentrated Solutions of Poly (γ-Benzyl L-Glutamate), 531
Trepka, W. J.: Synthesis and Properties of Block Polymers of 1,1-Diphenylethylene/Styrene and Butadiene, 499
Tsuji, K. and Seiki, T.: Observation of Absorption Spectra Due to Charge Transfer Complexes on Polymers with Oxygen and its Possible Contribution to Radical Formation in Polymers by Ultraviolet Irradiation, 817
Tsujimoto, I.: see Takahashi, T.
Tsuruyà, S., Taoka, S., Nakamae, K., and Yonezawa, T.: Polymerization of 2,4,6-Tribromophenol by Cooper (II)-Acetonitrile Complex, 275
Tuinstra, F. and Baer, E.: Epitaxial Crystallization of Polyethylene on Graphite, 861
Uchida, Y.: see Kashiwagi, T.
Uchiyama, H.: see Imai, Y.
Uhlmann, D. R.: see Calvert, P. D.
Vigo, T. L.; Mitcham, D., and Welch, C. M.: Decrystallization of Cotton Cellulose by Benzyltrimethylammonium Hydroxide Followed by Polar Organic Solvents, 385
de Visser, A. C., Feyen, J., de Groot, K., and Bantjes, A.: Bulk Polymerization of Cholesteryl Acrylate, 805
Vonk, C. G.: see Graff, R. J. L.
Wang, J. S., Porter, R. S., and Knox, J. R.: Temperature Coefficients for the Viscosity of Poly-1-Olefins, 671
Wang, T. T., Chen, H. S., and Kwei, T. K.: A Tough and Transparent Polyethylene, 505
Warren, T. C.: see Gouda, J. H.
Wasley, W. L.: see Pittman, A. G.
Waywell, D. R.: Estimation of the Ceiling Temperature for the Polymerization of Acetone, 327
Welch, C. M.: see Vigo, T. L.
Wiles, D. M.: see Carlsson, D. J.
Williams, J. L. and Stannett, V.: Spontaneous Grafting in the Presence of Swelling Agents, 711
Williams, M. C.: see Leary, D. F.
Witzel, J. M.: see Jablonski, R. J.
Wrasidlo, W. and Augl, J. M.: Phenylated Polypyrazinoquinoxalines, 69
Wysoczanski, J.: see Owens, C.
Yamaji, K.: see Hagiwara, M.
Yamashita, Y., Hirota, M., Nobutoki, K., Nakamura, Y., Hirao, A., Kozawa, S., Chiba, K., Matsui, H., Hattori, G., and Okada, M.: Block Copolymerization I, Ion Coupling of Polytetrahydrofuran Diction and Polysturene Dianion, 481
Yanez, A.: see Abuin, E.
Yen, S. P. S.: see Somoano, R.
Yim, A. and St. Pierre, L. E.: The Effect of Interfacial Energy on Heterogeneous Nucleation in the Crystallization of Polydimethylsiloxane, 241
Yonezawa, T.: see Tsuruyà, S.
Yoshihara, T.: see Imai, Y.
Zucchini, U.: see Giannini, U.

SUBJECT INDEX, VOLUME 8

Acetone, polymerization of, ceiling temperature estimate, 327
α-cyanomethyl acrolein, alternating copolymerization of, 293
α-lin-poly-p-xylylene, molecular weight by neutron activated end-group analysis, 823
α-methylstyrene, cationic polymerization of, charge transfer complex initiator, 585
Bis-5-oxazolones, synthetic chemistry of, 537
Butadiene, with acrylonitrile, copolymerization accelerated by UV-irradiation, 47
Catalysts, Ziegler, size of primary particles, 735
Cavity formation, in thick crazes, 159
Cellulose,
  cotton, decrystallized by benzyltrimethylammonium hydroxide, 385
  crosslinking in, light initiated, 839
Cis-1,4-polybutadiene,
  crystalline, lasar- excited Raman scattering of, 137
  graft copolymerization of, onto poly(vinyl Chloride), 361
Chain ends, effect of annealing on, in single crystals of polyethylene, 13
Chain folding, during selenium crystallization, 37
Chain segregation, in polyethylene, mixed crystal infrared study, 143
Charge transfer complexes, absorption spectra, and radical formation of polymers, 817
4-chloroformyl phthalic anhydride, p interfacial polymerization of, 559
Cholesteryl acrylate, bulk polymerization of, 805
Chromatographic data, gel permeation, intrinsic viscosity from, 785
Chromatography, supercritical fluid, chromatogram calculations of molecular weight, 748
Colloids, polymer, particle formation in nomicellar systems, 703
Complexes, $EtAlCl_2$, with acrylic monomers, 631
Copolymer, block, viscoelastic behavior of styrene-butadiene-styrene, 149
Copolymer, three-block, simple cubic geometry from x-ray scattering, 659
Copolymerization,
  alternating, of α-cyanomethyl acrolein, 293
  block, polytetrhydrofuran dication and polystyrene dianion, ion coupling, 481
  by UV-irradiation, of butadiene with acrylonitrile, 47
  by $VOCL_3$-$Al(C_2H_5)_3$ catalyst, of styrene acrylonitrile, 267
  donor-acceptor complexes in, styrene-acrylonitrile, 183
  donor-acceptor complexes in styrene and methyl methacrylate, 235
  electroinitiated reactions with donor-acceptor complexes, I.,II, 695, 699
  free radical, by styrene-acrylonitrile, charge transfer complex, 401
  free radical, of isothiocyanate function, 323
  free radical, of styrene and meth methacrylate, initiated by styrene-maleic anhydride charge transfer complex, 549

of methacrolein with styrene, with ZnCl present, 627
Copolymers,
acrylonitrile and butadiene, segment size and elongation, 25
block, domain formation in, 195
block, statistical thermodynamics of A-B-A, 335
block, of polyether-urethane and polyester urethane, electron microscope investigations, 353
graft and block, emulsifying effect of, 109
of vinyl chloride and vinyl ethers, 607
thermoplastic elastomeric, of ethylene sulfide and propylene sulfide, 199
Crosslinking, light initiated, in cellulose, 839
Crystallization,
of extended-chain crystals of polyethylene, from melt at high pressure, 165
selenium, chain folding during, 37
epitaxial, of polyethylene on graphite, 861
Crystals, polymer, epitaxial growth of, on uniaxially drawn polymers, 651
Disordered systems, carrier mobility and long-range order of, 217
Domain formation, in block polymers, 195
Donor-acceptor complexes, electroinitiated copolymerization reactions, I., II., 695, 699
Drag, tethered ball in solutions of drag reducing polymers, 611
Elastomers,
silica reinforced silicone, mechanism of strain energy storage, 115
structure-equivalence principle in carbon black reinforced, 601
"Endo"-dicyclonpentadiene, 1,2-dihydro-"endo"-dicyclopentadiene, 9,10-dihydro-"endo" dicyclopentadiene, cationic polymerization of, 573
$EtAlCl_2$ complexes, with acrylic monomers, 631
Ethylene, polymerization with titanium,chromate-triethylaluminum, 435
Gelation, thermally reversible, helical conformations, 425
Grafting,
cerium initiated, onto cellulose materials, 75
spontaneous, swelling agents present, 711
Ion exchange resins, characterization by NMR, 259
Ionene polymers, effect on dilute clay suspensions, 773
Ionenes, elastomeric, electronic conductivity of, 467
Isocyanates, polymerization and trimerization of, catalyzed by nickel complexes, 173
Isoprene, sterospecific polymerization of, by monometallic nickel catalysts, 743
Laminar flow, symmetry conditions, of polymer solutions, 107
Membranes, polyimidazopyrrolone reverse osmosis, 563
Methacrolein with styrene, copolymerization of, with ZnCl present, 627
Methyl methacrylate,
network formation induced by acetylenic compounds in polymerization, 155
stereospecific polymerization of, by magnesium amides, 101
Monomers, crystal, polymerization of, 289
μ-oxo-alkoxides, bimetallic, preparation of, III. polymerization of epoxides, 319

n-hectane, thermal analysis of, 395
Neutron activation, end-group analysis, determining molecular weight, 823
NMR,
analyse microstructure des polyisoprenes, 723
characterization of ion exchange resins, 259
spectrum of poly(propene-2-d_1)sulfide, 51
Olefins, polymerization of, by benzyl derivatives of titanium and zirconium, 405
Oxidation, electrolytic, of poly-m-N, N-1 dimethylaminostyrene, 127
Paracrystals, melting of, 41
Polyacetylenes, photosensitive, 97
Polyacrylonitrile, amorphous, preparation and characterization of, 281
Polyamides, caracterisation par chromatographie, 441
Poly(arylene sulfides), preparation by iron-catalyzed aromatic sulfuration with sulfur chlorides, 19
Polycarbonate,
crystallized of bisphenol A, correlation between enthalpy of fusion and specific volume of, 645
deformation and fracture characteristics under high pressure, 95
Poly(ether)urethane elastomers, proton resonance spectra of, 767
Poly(ethylene oxide), thermodynamic melting point of, 731
Polyethylene single crystals, glass transition in surface layers, 685
Polyethylene,
biaxially oriented, 341
chain segregation of, by infrared study, 143
crystallization of extended- chain crystals, 165
high temperature x-ray diffraction of, from drawn and stress-crystallized, 519
irradiated, ionic species in, 313
epitaxial crystallization on graphite, 861
irradiated linear, fusion of, 717
particle-form, microstructure of, 855
phosphorylated, mechanical thermal properties of, 81
single crystals, effect of annealing on chain ends, 13
tough and transparent, 505
Polyfuran, structure of, 795
Poly(γ-benzyl L-glutamate), electric field orientation of concentrated solutions of, 531
Polyimide precursor, synthesis of, 29
Polyisoprene, structure from thermal degradation data, 617
Polyisoprenes, analyse de microstructue par NMR, 723
Poly-m-N,N-dimethylaminostyrene, electrolytic oxidation of, 127
Polymer,
crystalline, from solid-state photopolymerization of 2,5-distyrylpyrazine, 7552,5-distyrylpyrazine, photopolymerization of, to obtain crystallize polymer, 755
new, from polybutadiene and prepolymer diamine, 191
Polymer colloids, particle formation in nomicellar systems, 703
Polymer crystals,
epitaxial growth of, on uniaxially drawn polymers, 651
simple chain refolding scheme for the annealing behavior of, 253
Polymer films, crystalline, planar orientation of molecular chains, 487
Polymer melts, comparison of normal stress measurements, 177
Polymer networks, polyacryalte-interpenetrating, thermal analysis of, 525

Polymer solutions, symmetry conditions in laminar flow, 107
Polymeric systems, x-ray diffraction angles with annealing, 493
Polymerization and trimerization, of isocyantes, 173
Polymerization catalysts, hydride and alkyl transfer, 271
Polymerization,
anionic, note on, 843
bulk, of cholesteryl acrylate, 805
by Cooper(II)-acetonitrile complex, of 2,4,6-tribromophenol, 275
by VCl_4-$Al(C_2H_5)_3$ catalyst system, of polar monomer, 205
cationic, initiation by charge transfer complexes, 809
cationic, of α-methylstyrene, charge transfer complex initiator, 585
cationic, of "endo"-dicyclopentadiene, 1,2-dihydro-"endo"-dicyclopentadiene, and 9,10-dihydro-"endo"-dicyclopentadiene, 573
charge transfer complex, effect of temperature on, 411
ceiling temperature for acetone, 327
diffusion controlled, generalized relations for, 431
gamma-initiated, of styrene, temperature effects in, 529
in vinyl, feric dipivaloyl methide initiator, 849
initiated by triethylborane-peroxide mixtures, 515
interfacial, of 4-chloroformyl phthalic anhydride, 559
iron-catalyzed of poly(p-phenoxyphenyl sulfide), 511
of alkylene oxides and aldehydes, novel binary system, 131
of liquid crystal monomers, 289
of methyl metacrylate, network formation induced by acetylenic compounds, 155
radiation induced, of trioxane, 643
stereospecific, of isoprene, by monometallic nickel catalysts, 743
stereospecific, of methyl methacrylate by magnesium amides, 101
with benzy derivatives of titanium and zirconium, of olefins, 405
with titanium chromate-triethylaluminum, of ethylene, 435
Polymers,
block, synthesis and properties of, 1,1-diphenylethylene styrene and butadiene, 499
bulk crystallized, melting behavior of, 381
condensed, approaches for variation of bimolecular rate constant with chain length, on character, 639
drag reducing, drag on tethered ball in solutions of, 611
from fluoroketones, IV. poly(1,4-bis (heptafluoroisipropoxy)2-butene oxide), 873
ionene, effect on dilute clay suspension, 773
ionene, high charge density, kinetics of formation, 457
multiple-sequence block, of poly (styrene) and poly(dimethylsiloxane), 677
tin(IV), novel phosphonato, 81
tritium labeling of, by microwave discharge, 65
Polymethacrylic acid, configural sequences by NMR study, 369
Polymides, preparing from N,N-bis (ethoxy-carbonyl) pyromellitimide and diamines, 555
Polymorphic transitions, diffuse, thermodynamic approach to, 231
Poly-l-olefins, temperature coefficients for viscosity of, 671
Poly(p-phenoxyphenyl sulfide), preparation by iron-catalyzed polymerization with a sulfenyl chloride, 511

Poly(propene-2-d_1 sulfide), NMR spectrum of, 51
Polypropylene, surface changes during photo-oxidation, 419
Polypyrazinoquinoxalines, phenylated, 69
Polyselenomethylenes, synthesis and electrical conductivity, 748
Poly(styrene) and poly(dimethylsiloxane, multiple-sequence block polymers of, 677
Poly(styrene sulfonic acid), steroregular, n-propylester of, 377
Polystyrene,
relationship for molecular weight-solution viscosity, 867
with improved thermal properties, 247
Polysulfane,
aromatic, radiation stability of, 121
new, form p,p'-difluoro-m,m' dinitrodiphenylsulfone and pyridine, 681
Polytetrafluoroethylene spherulites, linear growth rate of, 789
Poly(vinyl chloride),
mechanism of stabilization of, 1
modification of containing polysulfide crosslinkage, 7
reaction of, containing azide groups, 829
thermal stabilization, reacted with diethylaluminum chloride-alkanol, 349
Raman scattering, laser-excited, of crystalline cis-1,4-polybutadiene, 137
Strain energy storage, mechanism of, in silica reinforced silicone elastomers, 115
Styrene-acrylonitrile. . . . $Al(C_2H_5)_{1.5}Cl_{1.5}$ charge transfer complex, free radical polymerization by, 401
Styrene acrylonitrile, copolymerization of, with $VOCl_3$-$Al(C_2H_5)_3$ catalyst, 267
Styrene, temperature effects in gamma-initiated polymerization of, 529
Synthesis, novel polyimide precursor, 29
Trioxane, radiation induced polymerization of, 643
Tritium labeling, by microwave discharge, of polymers, 65
2,4,6-tribromophenol, polymerization of, by Cooper(II)-acetonitrile complex, 275
Viscosity, intrinsic, estimation from gel permeation chromatographic data, 785
Viscosity, temperature coefficients for poly-l-olefins, 671
X-ray diffraction angles, shifts of, in polymeric systems with annealing, 493
X-ray diffraction, high temperature, from drawn and stress-crystallized polyethylene, 519
X-ray scattering, simple cubic geometry from, in three-block copolymers, 659
Ziegler-Natta catalysis, homogeneous, with Ti-(IV)-systems, 205

Journal of Polymer Science Part B

Polymer Letters

Volume 8, 1970

Board of Editors: H. Mark • C. G. Overberger • T. G Fox
Advisory Editors: R. M. Fuoss • J. J. Hermans • H. W. Melville • G. Smets
Editors: C. G. Overberger • T. G Fox
Associate Editors: E. F. Casassa • H. Markovitz • E. Pearce

INTERSCIENCE PUBLISHERS a division of John Wiley & Sons, Inc.

Copyright © 1970 by John Wiley & Sons, Inc.

CONTENTS

Vol. 8, Issue Nos. 1–12

Journal of Polymer Science
Part B: Polymer Letters

ISSUE NO. 1, JANUARY

G. AYREY, R. C. POLLER, and I. H. SIDDIQUI: Mechanism of Stabilization of Poly(Vinyl Chloride) 1

KUNIO MORI and YOSHIRO NAKAMURA: Modification of Poly (Vinyl Chloride). XV. Poly(Vinyl Chloride) Containing Polysulfide Crosslinkage 7

A. KELLER and D. J. PRIEST: On the Effect of Annealing on the Chain Ends in Single Crystals of Polyethylene 13

TAMOTSU FUJISAWA and MASAMI KAKUTANI: Preparation of Poly (Arylene Sulfides) by Iron-Catalyzed Aromatic Sulfuration with Sulfur Chlorides 19

JUNJI FURUKAWA, AKINORI NISHIOKA, and TEIZO KOTANI: Statistical Segment Size and Ultimate Elongation of Acrylonitrile and Butadiene Copolymers 25

PETER DELVIGS, LI-CHEN HSU, and TITO T. SERAFINI: The Synthesis of a Novel Polyimide Precursor 29

RICHARD G. CRYSTAL: Chain Folding during Selenium Crystalization 37

TAMIO ARAKAWA and FUMIO NAGÁTOSHI: Melting of Paracrystals 41

JUNJI FURUKAWA, EIICHI KOBAYASHI, and YUTAKA ISEDA: Alternate Copolymerization of Butadiene with Acrylonitrile Accelerated by UV-Irradiation 47

K. J. IVIN and M. NAVRÁTIL: NMR Spectrum of Poly(Propene-2-d_1 Sulfide) 51

BOOK REVIEWS

EDWARD M. KROKOSKY: Fundamental Aspects of Fiber Reinforced Plastic Composites 55

WILLIAM J. BURLANT: Addition Polymers: Formation and Characterization 57

Polymer News 59

Polymer News 60

Polymer News 61

Erratum 63

ISSUE NO. 2, FEBRUARY

ARTHUR J. KAMP and YOSHIO KAWAHARA: Tritium Labeling of Polymers Using Microwave Discharge. I. Dextran. Preliminary Study 65

W. WRASIDLO and J. M. AUGL: Phenylated Polypyrazinoquinoxalines 69

YOHJI IMAI, EIICHI MASUHARA, and YOSHIO IWAKURA: Initiation Mechanism of Cerium-Initiated Grafting onto Cellulosic Materials 75

CLIFFORD OWENS, LOUIS L. PYTLEWSKI, NICHOLAS M. KARAYANNIS, JOHN WYSOCZANSKI, and MORTIMER M. LABES: Novel (Phosphonato)–Tin (IV) Polymers 81

P. J. PHILLIPS and W. J. MACKNIGHT: Mechanical and Thermal Properties of Phosphorylated Polyethylene 87

R. P. KAMBOUR: Comments on "Deformation and Fracture Characteristics of Polycarbonate under High Pressure" 95

A. S. HAY, D. A. BOLON, K. R. LEIMER, and R. F. CLARK: Photosensitive Polyacetylenes 97

YAHIDE KOTAKE, YASUSHI JOH, and FUMINO IDE: Stereospecific Polymerization of Methyl Methacrylate by Magnesium Amides 101

W. PHILIPPOFF: Symmetry Conditions in Laminar Flow of Polymer Solutions 107

J. PERIARD, A. BANDERET, and G. RIESS: Emulsifying Effect of Block and Graft Copolymers–Oil in Oil Emulsions 109

A. V. GALANTI and L. H. SPERLING: On the Mechanism of Strain Energy Storage in Silica Reinforced Silicone Elastomers 115

J. R. BROWN and J. H. O'DONNELL: The Radiation Stability of an Aromatic Polysulfone 121

HIROYOSHI KAMOGAWA: Electrolytic Oxidation of Poly-*m*-N,N-Dimethylaminostyrene 127

MIKIO NAKANIWA, IWAO KAMEOKA, KAZUO OZAKI, HITOSHI OHASHI, and JUNJI FURUKAWA: Novel Binary System of Metal Alkyl and One of Series Compounds Having N–O Bond (Nitro, Nitroso, Azoxy, or N-Nitroso) for Polymerization of Alkylene Oxides and Aldehydes 131

S. W. CORNELL and J. L. KING: Laser-Excited Raman Scattering of Crystalline Cis-1,4-Polybutadiene 137

ISSUE NO. 3, MARCH

M. I. BANK and S. KRIMM: Mixed Crystal Infrared Study of Chain Segregation in Polyethylene 143

M. SHEN and D. H. KAELBLE: On the Viscoelastic Behavior of a Styrene-Butadiene-Styrene (S-B-S) Block Copolymer 149

MIYUKI HAGIWARA, KATSUHIRO YAMAJI, HIROSHI MITSUI, and TSUTOMU KAGIYA: Network Formation Induced By Acetylenic Compounds in the Polymerization of Methyl Methacrylate 155

J. MURRAY and D. HULL: Direct Observation of Cavity Formation in Thick Crazes 159

P. D. CALVERT and D. R. UHLMANN: Direct Crystallization of Extended-Chain Crystals of Polyethylene from the Melt at High Pressure 165

T. KASHIWAGI, M. HADAI, Y. UCHIDA, and A. MISONO: Polymerization and Trimerization of Isocyanates Catalyzed by Nickel Complexes 173

KUNISUKE SAKAMOTO and ROGER S. PORTER: Comparison of Normal Stress Measurements on Polymers Melt 177

NORMAN G. GAYLORD and HELENA ANTROPIUSOVA: Donor-Acceptor Complexes in Copolymerization. VII. Competing Reactions in Styrene-Acrylonitrile Copolymerization in the Presence of Zinc Chloride 183

RICHARD J. JABLONSKI, JOHN M. WITZEL, and DANIEL KRUH: A New Polymer from Polybutadiene and a Prepolymer Diamine 191

D. G. LEGRAND: Domain Formation in Block Copolymers 195

DUNCAN A. MACKILLOP: Thermoplastic Elastomers Block Copolymers of Ethylene Sulfide and Propylene Sulfide 199

G. HENRICI-OLIVÉ and S. OLIVÉ: Homogeneous Ziegler-Natta Catalysis with Ti-(IV)-Systems. II. Atactic Low Molecular Weight Polypropylenes 205

SUNIT S. DIXIT, A. B. DESHPANDE, and S. L. KAPUR: Polymerization of Polar Monomer by VCl_4-$Al(C_2H_5)_3$ Catalyst System in Polar Medium 211

Polymer News 215

ISSUE NO. 4, APRIL

R. J. FLEMING: Carrier Mobility and Long-Range Order in Disordered Systems 217

J. H. GOUDA, K. POVODATOR, T. C. WARREN, and W. PRINS: Evidence for a Micro-Mesomorphic Structure in Poly(2-Hydroxyethyl Methacrylate) Hydrogels 225

FRANCIS J. BARTIS: Thermodynamic Approach to Diffuse Polymorphic Transitions 231

NORMAN G. GAYLORD, BOHUMIR MATYSKA, and BRIAN ARNOLD:

Donor-Acceptor Complexes in Copolymerization. V. The "Non-Terminating" Stage in the Copolymerization of Styrene and Methyl Methacrylate in the Presence of $(C_2H_5)_{1.5}AlCl_{1.5}$ 235

A. YIM and L. E. ST. PIERRE: The Effect of Interfacial Energy on Heterogeneous Nucleation in the Crystallization of Polydimethylsiloxane 241

N. GRASSIE, I. G. MELDRUM, and J. GILKS: Polystyrene with Improved Thermal Properties—A New Method of Preparing Crosslinked Polystyrene 247

P. DREYFUSS and A. KELLER: A Simple Chain Refolding Scheme for the Annealing Behavior of Polymer Crystals 253

A. DAŘÍCKOVÁ; D. DOSKOČILOVÁ, S. ŠEVČIK, and J. ŠTAMBERG: Note on the Characterization of Ion Exchange Resins by NMR 259

MASAO KATO, MASAKI HASEGAWA, and TARO ICHIJO: Photopolymers from β-Vinyloxyethyl Esters of Cinnamic Acid and Styryl Acrylic Acid 263

SUNIT S. DIXIT, A. B. DESHPANDE, L. C. ANAD, and S. L. KAPUR: Alternate Copolymerization of Styrene Acrylonitrile with $VOCl_3$-$Al(C_2H_5)_3$ Catalyst System 267

G. HENRICI-OLIVE and S. OLIVE: Hydride and Alkyl Transfer at Ti-Al Polymerization Catalysts 271

SHIGERU TSURUYÀ, SHINICHI TAOKA, KENJI NAKAMAE, and TEIJIRO YONEZAWA: Polymerization of 2,4,6-Tribromophenol by Cooper(II)-Acetonitrile Complex 275

YOSHIKATSU IMAI, SHUNSUKE MINAMI, TOSHIO YOSHIHARA, YASUSHI JOH, and HIROSHI SATO: Preparation and Characterization of Amorphous Polyacrylonitrile 281

WILLIAM J. TOTH and ARTHUR V. TOBOLSKY: Polymerization of Liquid Crystal Monomers 289

ICHIRO TAKEMURA and HIROSHI SUMITOMO: Alternating Copolymerization of α-Cyanomethyl Acrolein with Styrene 293

Polymer News 301

BOOK REVIEWS

J. N. HENDERSON: High Polymers, Vol. XXIII, "Polymer Chemistry of Synthetic Elastomers, Part II" 303

C. G. OVERBERGER and P. H. VANDEWYER: Introduction a la Chemie Macromoleculaire 304

JOHN E. HEARST: Statistical Mechanics of Chain Molecules. . . . 305

PAUL H. LINDENMEYER: Molecular Dynamics and Structure of Solids 307

ROBERT L. PATRICK: Interface Conversion for Polymer Coatings 309

ISSUE NO. 5, MAY

D. CAMPBELL: Ionic Species in Irradiated Polyethylene at 77°K. 313

M. OSGAN, J. J. PASERO, and PH. TEYSSIE: An Alternative Preparation of Bimetallic μ-Oxo-Alkoxides III. Catalysts for the Polymerization of Epoxides 319

GEORGE A. MORTIMER: Free Radical Copolymerization of the Isothiocyanate Function. 323

DAVID R. WAYWELL: Estimation of the Ceiling Temperature for the Polymerization of Acetone 327

DAVID F. LEARY and MICHAEL C. WILLIAMS: Statistical Thermodynamics of A–B–A Block Copolymers: I 335

C. P. BUCKLEY, R. W. GRAY, and N. G. MCCRUM: Biaxially Oriented Polyethylene 341

NORMAN G. GAYLORD and AKIO TAKAHASHI: Thermal Stabilization of Poly(Vinyl Chloride) through Reaction with Diethylaluminum Chloride-Alkanol 349

J. A. KOUTSKY, N. V. HIEN, and S. L. COOPER: Some Results on Electron Microscope Investigations of Polyether-Urethane and Polyester-Urethane Block Copolymers 353

NORMAN G. GAYLORD and AKIO TAKAHASHI: Graft Copolymeri-

zation of Cis-1,4-Polybutadiene onto Poly(Vinyl Chloride) 361

E. KLESPER, A. JOHNSEN, and W. GRONSKI: NMR Study of Configurational Sequences in Polymethacrylic Acid 369

N. N. AYLWARD: The n-Propylester of Stereoregular Poly(Styrene Sulfonic Acid) 377

R. C. ROBERTS: The Melting Behavior of Bulk Crystallized Polymers 381

ISSUE NO. 6, JUNE

TYRONE L. VIGO, DONALD MITCHAM, and CLARK M. WELCH: Decrystallization of Cotton Cellulose by Benzyltrimethylammonium Hydroxide Followed by Polar Organic Solvents 385

J. N. HAY: Thermal Analysis of n-Hectane. 395

NORMAN G. GAYLORD and BIRENDRA PATNAIK: Initiation of Free Radical Copolymerization by the Styrene-Acrylonitrile. . . $Al(C_2H_5)_{1.5}$ $Cl_{1.5}$ Charge Transfer Complex 401

U. GIANNINI, U. ZUCCHINI, and E. ALBIZZATI: Polymerization of Olefins with Benzyl Derivatives of Titanium and of Zirconium 405

NORMAN G. GAYLORD and BIRENDRA PATNAIK: Effect of Temperature in the Polymerization of Charge Transfer Complexes: Styrene- and α-Methylstyrene-Acrylonitrile. . .Al $(C_2H_5)_{1.5}Cl_{1.5}$ 411

D. J. CARLSSON and D. M. WILES: Surface Changes during the Photo-Oxidation of Polypropylene 419

HOWARD C. HAAS and RUBY L. MACDONALD: Helical Conformations and Thermally Reversible Gelation 425

R. L. KRUSE and G. ODIAN: Generalized Relations for Diffusion Controlled Polymerizations 431

KIICHIRO MATSUMURA, YUJI ATARASHI, and OSAMU FUKUMOTO: Polymerization of Ethylene with Titanium Chromate-Triethylaluminum System 435

R. PANARIS and G. PALLAS: Caracterisation des Polyamides par Chromatographie sur Gel (GPC) en Milieu Hexamethylphosphorotriamide 441

BOOK REVIEWS

R. R. RABENOLD: Handbook of Fiberglass and Advanced Plastics Composites 447

PHILIP WEISS: Aspects of Adhesion 5 449

WILLIAM D. CLAUS, JR: High Speed Testing, Volume VII, The Rheology of Solids 450

PETER B. LEDERMAN: Describing Chemical Engineering Systems 452

H. A. VOGEL: Heteroatom Ring Systems and Polymers 453

A. SCHINDLER: Polymerisation. Katalyse-Kinetik-Mechanismen . 454

ELLIOT FARBER: Reviews in Macromolecular (Volume 4) 455

ISSUE NO. 7, JULY

A. REMBAUM, H. RILE, and R. SOMOANO: V. Kinetics of Formation of High Charge Density Ionene Polymers 457

R. SOMOANO, S. P. S. YEN, and A. REMBAUM: VI. Electronic Conductivity of Elastomeric Ionenes 467

YUYA YAMASHITA, MASAHIRO HIROTA, KOJI NOBUTOKI, YOICHI NAKAMURA, AKIRA HIRAO, SHIGEYUKI KOZAWA, KAZUMASA CHIBA, HISASHI MATSUI, GENJIRO HATTORI, and MASAHIKO OKADA: Block Copolymerization I, Ion Coupling of Polytetrahydrofuran Dication and Polystyrene Dianion 481

T. AKAHANE and T. MOCHIZUKI: Planar Orientation of Molecular Chains in Crystalline Polymer Films 487

T. AKAHANE and T. MOCHIZUKI: Shifts of X-Ray Diffraction Angles of Polymeric Systems with Annealing 493

WILLIAM J. TREPKA: Synthesis and Properties of Block Poly-

mers of 1,1-Diphenylethylene/Styrene and Butadiene 499

T. T. WANG, H. S. CHEN, and T. K. KWEI: A Tough and Transparent Polyethylene 505

TAMOTSU FUJISAWA and MASAMI KAKUTANI: Preparation of Poly(p-Phenoxyphenyl Sulfide) by Iron-Catalyzed Polymerization with a Sulfenyl Chloride 511

E. ABUIN, E. A. LISSI, and A. YANEZ: Polymerization Initiated by Triethylborane-Peroxide Mixtures 515

S. B. CLOUGH: High Temperature X-Ray Diffraction from Drawn and Stress-Crystallized Polyethylene 519

DANIEL KLEMPNER and H. L. FRISCH: Thermal Analysis of Polyacrylate-Interpenetrating Polymer Networks 525

ISSUE NO. 8, AUGUST

S. P. SOOD and J. W. HODGINS: Temperature Effects in the Gamma-Initiated Polymerization of Styrene 529

WILLIAM J. TOTH and ARTHUR V. TOBOLSKY: Electric Field Orientation of Concentrated Solutions of Poly(γ-Benzyl L-Glutamate) 531

LLOYD D. TAYLOR, THOMAS E. PLATT, and MARTIN H. MACH: The Synthetic Chemistry of Bis-5-Oxazolones 537

KUNIHARU KOJIMA, YOICHI IWATA, MASAKO NAGAYAMA, and SUSUMU IWABUCHI: Polymerization of Methyl Methacrylate by Trialkylborane-Pyridine System 541

NORMAN G. GAYLORD and BIRENDRA PATNAIK: Free Radical Copolymerization of Styrene and Methyl Methacrylate Initiated by the Styrene-Maleic Anhydride Charge Transfer Complex 549

YOSHIO IMAI: A Novel Method for Preparing Polyimides from N,N′-Bis(Ethoxycarbonyl) Pyromellitimide and Diamines 555

YOSHIO IMAI and HIROSHI UCHIYAMA: A Novel Interfacial Polymerization of 4-Chloroformyl Phthalic Anhydride with

Aromatic Diamines in a Methyl Ethyl Ketone-Water System 559

H. Scott, F. L. Serafin, and P. L. Kronick: Polyimidazopyrrolone Reverse Osmosis Membranes 563

Sebastiano Cesca, Aldo Priola, and Giuliano Santi: The Catonic Polymerization of "Endo"-Dicyclopentadiene, 1,2-Dihydro-"Endo"-Dicyclopentadine and 9,10-Dihydro-"Endo"-Dicyclopentadiene 573

Masahiro Irie, Setsuko Tomimoto, and Koichiro Hayashi: Catonic Polymerization of α-Methylstyrene Initiated by Excited Charge Transfer Complex 585

Book Reviews

Edward F. Casassa: Introduction to Polymer Science 589

J. J. Bikerman: Fundamentals of the Polymer Adhesion 592

Fred G. Hoffman: The Determination of Organic Peroxides . 593

Cheeves Walling: Organic Peroxides 594

F. Bueche: Viscoelastic Properties of Polymers 595

Herbert N. Friedlander: Applied Polymer Symposia, Vol. 11, "New Polymeric Materials" 596

F. P. Boettcher: Applied Polymer Symposia, Vol. 9, "High Temperature Resistant Fibers from Organic Polymers" 597

Announcement 599

Issue No. 9, September

G. Kraus: A Structure–Concentration Equivalence Principle in Carbon Black Reinforcement of Elastomers 601

Z. Janović and C. S. Marvel: Copolymers of Vinyl Chloride and Vinyl Ethers, Acrylates, and Methacrylates of Some Fatty Acids 607

F. S. Stow, Jr. and J. H. Elliott: Drag on a Tethered Ball

in Solutions of Drag Reducing Polymers 611

M. J. HACKATHORN and M. J. BROCK: Polyisoprene Structure from Thermal Degradation Data 617

G. H. ARMSTRONG and H. J. HARDWOOD: Copolymerization of Methacrolein with Styrene in the Presence of $ZnCl_2$ 627

J. FURUKAWA, Y. ISEDA, and E. KOBAYASHI: $EtAlCl_2$ Complexes with Acrylic Monomers 631

S. C. JAIN: A Comparison of the Statistical and the Kinetic Approaches for the Variation of the Bimolecular Rate Constant with Chain Length on the Statistical Character of Condensation Polymers 639

M. H. RAO and K. N. RAO: Radiation Induced Polymerization of Trioxane 643

J. P. MERCIER and R. LEGRAS: Correlation between the Enthalpy of Fusion and the Specific Volume of Crystallized Polycarbonate of Bisphenol A 645

T. TAKAHASHI, M. INAMURA, and I. TSUJIMOTO: Epitaxial Growth of Polymer Crystals on Uniaxially Drawn Polymers . . 651

D. S. BROWN, K. U. FULCHER, and R. E. WETTON: Evidence of Simple Cubic Geometry from Small-Angle X-Ray Scattering in Three-Block Copolymers 659

BOOK REVIEWS

Treatise on Adhesion and Adhesives, Vol. I, R. L. Patrick, Ed. Reviewed by F. R. EIRICH 665

Plastic Foams, Vol. I: Chemistry and Physics of Foam Formation, Vol. II: Structure, Properties and Application, by C. J. Benning. Reviewed by K. C. FRISCH 666

Poly(Vinyl Alcohol), by J. G. Prichard. Reviewed by H. C. HAAS 668

Information for Contributors 669

ISSUE NO. 10, OCTOBER

JEOU-SHYONG WANG, ROGER S. PORTER, and JACK R. KNOX: Temperature Coefficients for the Viscosity of Poly-1-Olefins 671

JOHN W. DEAN: Multiple-Sequence Block Polymers of Poly-(Styrene) and Poly(Dimethylsiloxane) 677

HIMANSU MUKERJEE, ARUNENDU SIRKAR, and SANAT K. BHATTACHARYA: A New Polysulfone from p,p′-Difluoro-m,m′ Dinitrodiphenylsulfone and Pyridine 681

E. W. FISHER and F. KLOOS: Proof of the Existance of a Glass Transition in the Surface Layers of Polyethylene Single Crystals 685

B. LIONEL FUNT, IAN MCGREGOR, and JOHN TANNER: Electroinitiated Copolymerization Reactions with Donor-Acceptor Complexes. I. Copolymerization of Styrene and Methylmethacrylate with Zinc Chloride as Catalyst 695

B. LIONEL FUNT, IAN MCGREGOR, and JOHN TANNER: Electroinitiated Copolymerization Reactions with Donor-Acceptor Complexes. II. Copolymerization of Styrene and Acrylonitrile with Zinc Bromide as Catalyst 699

ROBERT M. FITCH and CHUNG-HSUING TSAI: Polymer Colloids: Particle Formation in Nonmicellar Systems 703

J. L. WILLIAMS and V. STANNETT: Spontaneous Grafting in the Presence of Swelling Agents 711

A. M. RIJKE and L. MANDELKERN: The Fusion of Irradiated Linear Polyethylene Crystallized by High Speed Stirring 717

QUANG-THO PHAM: Analyse de la Microstructure des Polyisoprenes de Synthese par Resonance Magnetique Nucleaire–Haute Resolution 723

D. R. BEECH and C. BOOTH: Thermodynamic Melting Point of Poly(Ethylene Oxide) 731

R. J. L. GRAFF, G. KORTLEVE, and C. G. VONK: On the size of the Primary Particles in Ziegler Catalysts 735

Polymer News 741

ISSUE NO. 11, NOVEMBER

J. P. DURAND and F. DAWANS: Stereospecific Polymerization of Isoprene by Mono-metallic Nickel Catalysts 743

F. SANDROLINI, P. MANARESI, S. PIETRA, L. MORTILLARO, and M. RUSSO: Synthesis and Electrical Conductivity of Polyselenomethylenes 748

HACHIRO NAKANISHI, NOBUHIKO NAKANO, and MASAKI HASEGAWA: Crystalline Polymer Obtained by Solid-State Photopolymerization of 2,5-Distyrylpyrazine 755

T. ALTARES, JR.: Supercritical Fluid Chromatography: Molecular Weight Calculations from the Chromatogram 761

HAJIME SUZUKI: Proton Resonance Spectra of Poly(Ether) Urethane Elastomers and Model Compounds. 767

D. CASSON and A. REMBAUM: VII. The Effect of Ionene Polymers on a Dilute Clay Suspension 773

JACK CAZES and RUSSELL J. DOBBINS: Estimation of Intrinsic Viscosity from Gel Permeation Chromatographic Data 785

TED KATZ: Linear Growth Rate of Polytetrafluoroethylene Spherulites 789

J. KRESTA and H. K. LIVINGSTON: The Structure of Polyfuran 795

A. C. DE VISSER, J. FEYEN, K. DE GROOT, and A. BANTJES: Bulk Polymerization of Cholesteryl Acrylate 805

NORMAN G. GAYLORD, BIRENDRA PATNAIK, and AKIO TAKAHASHI: Initiation of Catonic Polymerization by the α-Methylstyrene-Acrylonitrile and -Methacrylonitrile. . . $AlEt_{1.5}Cl_{1.5}$ Charge Transfer Complexes 809

KOZO TSUJI and TOSHIFUMI SEIKI: Observation of Absorption Spectra Due to Charge Transfer Complexes on Polymers with Oxygen and its Possible Contribution to Radical Formation in Polymers by Ultraviolet Irradiation 817

MITSUE KOBAYASHI: End-Group Analysis by Neutron Activation. Determination of Molecular Weight of α-Lin-Poly-p-Xylyene 823

MAKOTO TAKEISHI and MAKOTO OKAWARA: Reaction of Poly(Vinyl Chloride) Containing Azide Groups 829

Polymer News 835

Errata 837

ISSUE NO. 12, DECEMBER

R. L. DESAI and J. A. SHIELDS: Light-Initiated Crosslinking in Cellulose 839

S. C. JAIN and V. S. NANDA: A Note on Anionic Polymerization 843

UMA SHANKAR NANDI, NANIBHUSHAN DATTA GUPTA, and AMIYA BHATTACHARYYA: Ferric Dipivaloyl Methide as Initiator in Vinyl Polymerization 849

THEODORE DAVIDSON: Microstructure of Particle-Form Polyethylene 855

F. TUINSTRA and ERIC BAER: Epitaxial Crystallization of Polyethylene on Graphite 861

HENNO KESKKULA and W. C. TAYLOR: Molecular Weight-Solution Viscosity Relationship for Polystyrene 867

A. G. PITTMAN, W. L. WASLEY, and J. ROITMAN: Polymers Derived from Fluoroketones. IV. Poly(1,4-Bis(Heptafluoroisopropoxy) 2-Butene Oxide) 873

BOOK REVIEWS

Analysis and Characterization of Coatings and Plastics, C. L. Lucchesi. Reviewed by H. L. GERHART 779

The Analysis of Rubber and Rubber-Like Polymers, 2nd Ed., W. C. Wake. Reviewed by H. L. STEPHENS 780

Author Index, Volume 8 881

Subject Index, Volume 8 889

Volume Title Page i

Volume Contents iii